

## ABSTRACT OF THE DISCLOSURE

To provide a method of manufacturing silicon carbide by forming silicon carbide on a substrate surface from an atmosphere containing a silicon carbide feedstock gas comprising at least a silicon source gas and a carbon source gas under condition 1 or 2 below:

Condition 1: the partial pressure  $p_s$  of silicon source gas is constant (with  $p_s > 0$ ), the partial pressure of carbon source gas consists of a state  $p_{c1}$  and a state  $p_{c2}$  that are repeated in alternating fashion, wherein  $p_{c1}$  and  $p_{c2}$  denote partial pressures of carbon source gas,  $p_{c1} > p_{c2}$ , and  $p_{c1}/p_s$  falls within a range of 1-10 times the attachment coefficient ratio ( $S_s/S_c$ ),  $p_{c2}/p_s$  falls within a range of less than one time  $S_s/S_c$ ;

Condition 2: the partial pressure  $p_c$  of carbon source gas is constant (with  $p_c > 0$ ), the partial pressure of silicon source gas consists of a state  $p_{s1}$  and a state  $p_{s2}$  that are repeated in alternating fashion, wherein  $p_{s1}$  and  $p_{s2}$  denote partial pressures of silicon source gas,  $p_{s1} < p_{s2}$ , and  $p_c/p_{s1}$  falls within a range of 1-10 times  $S_s/S_c$ ,  $p_c/p_{s2}$  falls within a range of less than one time  $S_s/S_c$ .